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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,487

09/21/2004

Khamir Girish Joshi

04-11

5486

32583 7590 10/28/2010  
KELLOGG BROWN & ROOT LLC  
ATTN: Christian Heausler  
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HOUSTON, TX 77020

EXAMINER

SINGH, SUNIL

ART UNIT

PAPER NUMBER

3672

NOTIFICATION DATE

DELIVERY MODE

10/28/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/711,487	<b>Applicant(s)</b> JOSHI ET AL.	
	<b>Examiner</b> Sunil Singh	<b>Art Unit</b> 3672	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 58-62, 64, 65 and 73-85 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 58-62, 64, 65 and 73-85 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. In view of the appeal brief filed on 8/3/10, PROSECUTION IS HEREBY REOPENED. The new grounds of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/David J. Bagnell/  
Supervisory Patent Examiner, Art Unit 3672.

### ***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification lack antecedent basis for the “tether system” called for in claim 61.

***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the tether system called for in claim 61 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

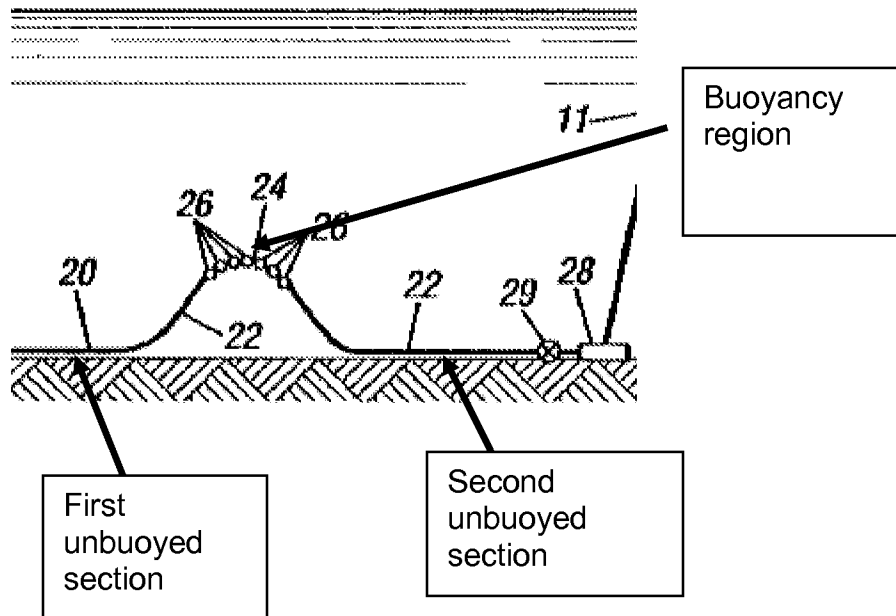
5. Claims 73-76,78-79 rejected under 35 U.S.C. 103(a) as being unpatentable over Richmond et al. '252 in view of Brown '325.

Richmond et al. discloses a pipeline comprising a first unbuoyed section (see drawing below, Fig. 2), second unbuoyed section (see drawing below, Fig. 2), at least one buoyancy section (24,26) disposed between the first and second sections. The positively buoyant inverse catenary section comprises two or more spatially arranged buoyancy solutions. Richmond et al. discloses the invention substantially as claimed. However Richmond et al. is silent about the topographic feature being selected from the group consisting of subsea basins, domes, valleys, cliffs, canyons, escarpments, and combinations thereof. Brown '325 teaches a pipeline traversing a topographic feature being selected from the group consisting of subsea basins, domes, valleys, cliffs, canyons, escarpments and combinations (see Figures). It would have been considered obvious to one of ordinary skill in the art to modify Richmond et al. to include the topographic feature as taught by Brown since such features are indigenous to the seabed environment.

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With regards to claim 76, it would have been considered obvious to modify Richmond et al. by substituting the buoyancy modules with tethered buoys (38) as taught by Brown since it is an obvious design choice to substitute one known element for another to obtain predictable results.

With regards to claim 78, it would have been considered obvious to modify Richmond et al. by having the first and second locations located on opposing sides of the topographic feature since such teaching is gleamed from Brown, wherein the first and second locations are located on opposing sides of the topographic feature.



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6. Claim 77 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richmond et al. in view of Brown as applied to claim 73 above, and further in view of Tucker (US 4100752).

Richmond et al. (once modified) discloses the invention substantially as claimed. However, Richmond et al. (once modified) is silent about the buoy (26) being a buoyant coating. Tucker teaches buoyancy solution can be either a coating or outer shell of flotation material (see col. 2 lines 20-25). It would have been considered obvious to one of ordinary skill in the art to further modify the (once modified) Richmond et al. by substituting a buoyant coating as taught by Tucker for the floatation material disclosed by Richmond et al. since such a modification facilitates the installation of the floatation means.

7. Claims 58,59,62,64,65,80,81,82,84,85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richmond et al. in view of Brown '325 and Moses et al. '977.

Richmond et al. discloses an apparatus to traverse a seabed topographic feature, comprising: a subsea pipeline constructed to carry fluids across the topographic feature between a first location and a second location; wherein: said pipeline comprising at least one distributed buoyancy region (see drawing above); said pipeline comprising a first unbuoyed pipeline section (see drawing above) extending from said first location on a sea floor to said distributed buoyancy region and a second unbuoyed pipeline section (see drawing above) extending from said distributed buoyancy region to said second

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location on a sea floor; and said distributed buoyancy region comprising two or more spatially arranged discrete buoyancy solutions directly attached to said distributed buoyancy region to create a positively buoyant inverse catenary section connecting said first and said second pipeline sections in fluid communication when said distributed buoyancy solutions are located below the waterline. Richmond et al. discloses the invention substantially as claimed. However Richmond et al. is silent about the topographic feature being selected from the group consisting of subsea basins, domes, valleys, cliffs, canyons, escarpments, and combinations thereof. Further, Richmond et al. lack a flexure control device between the first/second unbuoyed pipeline section and the distributed buoyancy region. Brown '325 teaches a pipeline traversing a topographic feature being selected from the group consisting of subsea basins, domes, valleys, cliffs, canyons, escarpments and combinations (see Figures). Moses et al. teaches a flexure control device (32) between the first/second unbuoyed pipeline section and the distributed buoyancy region (see Fig. 2, 11).

It would have been considered obvious to one of ordinary skill in the art to modify Richmond et al. to include the topographic feature as taught by Brown since such features are indigenous to the seabed environment.

It would have been considered obvious to one of ordinary skill in the art to modify Richmond et al. to include flexure devices and positions said flexure devices between the first/second unbuoyed pipeline section and the distributed buoyancy region as taught by Moses et al. in order to reduce stress at the point where the curvature of the pipeline changes.

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With regards to claim 64, it would have been considered obvious to further modify Richmond et al. (as modified above) by positioning the flexure control device proximate an edge of the topographic feature since such teaching is gleaned from Brown, wherein the buoyancy region is attached to first/second unbuoyed pipeline section at a proximate edge of the topographic feature and from Moses, wherein the flexure control device is positioned between the first/second unbuoyed pipeline section and buoyancy region.

With regards to claim 65, it would have been considered obvious to further modify Richmond et al. (as modified above) by positioning the flexure control device distant an edge of the topographic feature since such teaching is gleaned from Brown, wherein the buoyancy region is attached to first/second unbuoyed pipeline section at a distant edge of the topographic feature and from Moses, wherein the flexure control device is positioned between the first/second unbuoyed pipeline section and buoyancy region.

With regards to claim 82, it would have been considered obvious to modify Richmond et al. by substituting the buoyancy modules with tethered buoys (38) as taught by Brown since it is an obvious design choice to substitute one known element for another to obtain predictable results.

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8. Claims 60,83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richmond et al. in view of Brown and Moses et al. as applied to claims 58,80 above, and further in view of Tucker (US 4100752).

Richmond et al. (as modified above) discloses the invention substantially as claimed. However, Richmond et al. (as modified above) is silent about the buoyancy solution comprising a coating of buoyant material. Tucker teaches buoyancy solution can be either a coating or outer shell of flotation material (see col. 2 lines 20-25). It would have been considered obvious to one of ordinary skill in the art to further modify the (above modified) Richmond et al. by substituting a coating of buoyant material as taught by Tucker for the flotation material disclosed by Richmond et al. since such a modification facilitates the installation of the floatation means.

9. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richmond et al. in view of Brown and Moses et al. as applied to claim 58 above, and further in view of Wittgenstein (US 3173271 )

Richmond et al. (as modified above ) discloses the invention substantially as claimed. However, (the above modified) Richmond et al. is silent about including a tether system. Wittgenstein teaches a tether system (see col. 1 lines 1-35, see Figs. 1,2,4). It would have been considered obvious to one of ordinary skill in the art to further modify (the above modified) Richmond et al. to include a tether system as taught by Wittgenstein since such a modification would resist undesired (excessive) movement due to transverse current.

***Response to Arguments***

10. Applicant's arguments with respect to claims 60,61,64,65,77,83 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil Singh whose telephone number is (571) 272-7051. The examiner can normally be reached on Monday through Friday 10:30 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sunil Singh/  
Primary Examiner, Art Unit 3672

Sunil Singh  
Primary Examiner  
Art Unit 3672

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